

Message Text

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ACTION OES-07

INFO OCT-01 EA-10 ISO-00 FEA-01 ACDA-07 CIAE-00 INR-07
IO-13 L-03 NSAE-00 NSC-05 EB-08 NRC-05 DODE-00
SS-15 SP-02 AID-05 CEA-01 COME-00 FPC-01 H-01
INT-05 OMB-01 PM-05 USIA-06 STR-04 TRSE-00 /113 W
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FM AMEMBASSY TOKYO
TO SECSTATE WASHDC 631
INFO USERDA WASHDC
USERDA GERMANTOWN

C O N F I D E N T I A L TOKYO 13240

STATE PASS NSC

E.O. 11652: GDS
TAGS: PARM, ENRG, TECH, JA
SUBJECT: TOKAI NEGOTIATIONS: TEXT OF U.S. PRESENTATION ON
CO-PROCESSING

1. TEXT OF CUNNINGHAM STATEMENT MADE IN AFTERNOON SESSION AUG 29
FOLLOWS: BEGIN TEXT.

COPROCESSING

THE U.S. PROPOSAL CALLS FOR OPERATION OF TOKAI MURA IN AN
EXPERIMENTAL FULL-SCALE COPROCESSING MODE, FOR TWO YEARS FOLLOW-
ING THE INITIAL PERIOD OF OPERATION IN THE SCHEDULED MODE. I WANT
TO EXPLAIN THE COPROCESSING MODE WE HAVE IN MIND, HOW WE ARRIVE
AT IT, AND THE NATURE AND TIMING OF THE MODIFICATIONS INVOLVED.

THE JOINT U.S.-JAPANESE STUDY TEAM REVIEWED 15 DIFFERENT
CASES FOR OPERATING THE TOKAI MURA REPROCESSING FACILITY. AMONG
THE CASES STUDIED WERE OPERATION IN THE SCHEDULED MODE, WITH
IMPROVED SAFEGUARDS AND LIMITED THROUGHPUT VARIANTS; OPERATION IN
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A MODIFIED COPROCESSING MODE TO PRODUCE VARIOUS MIXTURES OF
PLUTONIUM AND URANIUM TO DILUTE THE OUTPUT PLUTONIUM CONTENT; AND
VARIOUS MODES THAT WOULD PRODUCE IRRADIATED PRODUCTS AT THE OUT-
PUT OF THE FACILITY, OR THAT WOULD INTRODUCE IRRADIATION AS A
DETERRENT TO SUB-NATIONAL DIVERSION AT A LATER STAGE.

AFTER CAREFUL STUDY OF THESE CASES AND OF JAPANESE NEEDS,

THE U.S. IDENTIFIED A COPROCESSING MODE AS THE APPROPRIATE ONE TO PURSUE, ON AN EXPERIMENTAL BASIS, FOLLOWING THE INITIAL SCHEDULED PERIOD OF OPERATION. THE SUGGESTED TWO-YEAR COPROCESSING OPERATION WAS SELECTED ON THE CRITERIA THAT IT SHOULD:

-- MINIMIZE TIME DELAYS AND COST INCREMENTS FOR OPERATING THE TOKAI MURA REPROCESSING FACILITY;

-- YIELD A PLUTONIUM-URANIUM PRODUCT SUITABLE FOR THE JAPANESE ADVANCED REACTOR RESEARCH AND DEVELOPMENT PROGRAM; AND

-- SERVE NONPROLIFERATION INTERESTS BY CONDUCTING EXPERIMENTS IN ALTERNATIVE REPROCESSING MODES.

THE COPROCESSING EXPERIMENT WHICH WE PROPOSE WOULD YIELD A PLUTONIUM-URANIUM PRODUCT DEVOID OF CONTAMINATION WITH FISSION PRODUCTS. THE U.S. DOES NOT SUGGEST A COPROCESSED PRODUCT TO WHICH RADIATION OF ANY TYPE WOULD SUBSEQUENTLY BE ADDED.

THE UNITED STATES SUGGESTS THAT THE SPECIFIC COMPONENT CONCENTRATION OF THE PLUTONIUM-URANIUM COPROCESSED MIXTURE BY MUTUALLY AGREED UPON. HOWEVER, THE PLUTONIUM CONCENTRATION SHOULD NOT BE IN EXCESS OF A CONCENTRATION WHICH WOULD SERVE THE STATED NEEDS OF THE JAPANESE ADVANCED REACTOR RESEARCH AND DEVELOPMENT PROGRAM. FOR SUCH PURPOSES, THE PLUTONIUM CONCENTRATION SHOULD BE LIMITED TO 25 PERCENT OF THE PLUTONIUM-URANIUM MIXTURE.
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THE JAPANESE SIDE HAS EXPRESSED CONCERN ABOUT MODIFICATIONS. IT APPEARS, HOWEVER, THAT THE CHANGES REQUIRED IN THE REPROCESSING PLANT TO PROVIDE FOR SUCH COPROCESSING INVOLVE MINOR EQUIPMENT MODIFICATIONS AND ADJUSTMENTS TO THE CHEMICAL FLOWSHEETS FOR PARTITIONING IN THE SECOND CYCLE AND PU THIRD CYCLE. THE EQUIPMENT MODIFICATIONS MAY BE LIMITED TO A FEW PIPING CHANGES ASSOCIATED WITH SOME MIXER-SETTLERS AND THE ADDITION OF A SECOND PLUTONIUM PRODUCT CONCENTRATOR. THE PIPING MODIFICATIONS FOR THE MIXER SETTLERS CAN BE DEFINED NOW AND COULD BE MADE IN A MATTER OF WEEKS BEFORE HOT OPERATION BEGINS IN ORDER TO MINIMIZE LATER PROBLEMS IN ENTERING THE HOT AREAS OF THE PLANT FOR THESE SAME MODIFICATIONS. SIMPLE PROVISIONS CAN BE MADE NOW, ALSO IN A SHORT TIME PERIOD, TO MAKE THE LATER ADDITION OF THE SECOND PU CONCENTRATOR LESS COSTLY AND TIME-CONSUMING.

IN ADDITION TO THE CHANGES IN THE REPROCESSING PLANT, NEW STORAGE TANKS AND ASSOCIATED BUILDING STRUCTURE MAY BE REQUIRED TO STORE THE PLUTONIUM-URANIUM PRODUCT STREAM FROM THE REPROCESSING PLANT UNTIL CONVERSION FACILITIES ARE AVAILABLE.

AS A RESULT OF PRELIMINARY STUDIES, PLANS HAVE BEEN MADE TO

CONDUCT EXPERIMENTAL STUDIES IN THE U.S. ON THE URANIUM-PLUTONIUM FUEL CYCLE TO DETERMINE WHETHER THAT CYCLE CAN MEET CRITERIA FOR PROLIFERATION RESISTANT FAST BREEDER FUEL SYSTEMS. THE RESULTS OF THE U.S. STUDIES WILL, OF COURSE, BE MADE AVAILABLE TO COOPERATING NATIONS IN THE INFCE PROGRAM, BUT THE RESULTS OF ANY SUCH PROGRAM, PARTICULARLY IN THE AREA OF COPROCESSING, ARE MUCH MORE LIKELY TO BE SUCCESSFUL IF THERE IS A CLOSE COOPERATION BETWEEN JAPAN AND THE U.S.

JAPAN HAS A UNIQUE OPPORTUNITY TO OPERATE A REPROCESSING PLANT IN THE COPROCESSING MODE. THE U.S., ON THE OTHER HAND, HAS EXTENSIVE EXPERIENCE IN PLUTONIUM CHEMISTRY AND HAS DEVELOPED THE COPRECAL METHOD FOR PRODUCING MIXED OXIDE POWDER. THUS, BY COOPERATION IN TECHNICAL MATTERS WE BELIEVE THAT MINIMUM DELAYS

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WILL BE INCURRED IN THE JAPANESE PROGRAM AND MAJOR PROGRESS CAN BE MADE TOWARD ACHIEVING THE GOALS OF NONPROLIFERATION. END TEXT.

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Message Attributes

Automatic Decaptioning: X
Capture Date: 01-Jan-1994 12:00:00 am
Channel Indicators: n/a
Current Classification: UNCLASSIFIED
Concepts: NUCLEAR ENERGY, WASTE DISPOSAL, NEGOTIATIONS, NUCLEAR POWER PLANTS, TOKAI MURA
Control Number: n/a
Copy: SINGLE
Sent Date: 30-Aug-1977 12:00:00 am
Decaption Date: 01-Jan-1960 12:00:00 am
Decaption Note:
Disposition Action: RELEASED
Disposition Approved on Date:
Disposition Case Number: n/a
Disposition Comment: 25 YEAR REVIEW
Disposition Date: 22 May 2009
Disposition Event:
Disposition History: n/a
Disposition Reason:
Disposition Remarks:
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From: TOKYO
Handling Restrictions: n/a
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TAGS: PARM, ENRG, TECH, JA
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